

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
11 March 2004 (11.03.2004)

PCT

(10) International Publication Number
WO 2004/021012 A3

(51) International Patent Classification⁷: **G01N 33/68**

(21) International Application Number:
PCT/IL2003/000706

(22) International Filing Date: 28 August 2003 (28.08.2003)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
60/406,687 29 August 2002 (29.08.2002) US

(71) Applicant (for all designated States except US): **DIAG-
NOSTIC TECHNOLOGIES LTD.** [IL/IL]; Ha'Histadrut
Blv. 49, 31250 Haifa (IL).

(72) Inventor; and

(75) Inventor/Applicant (for US only): **MEIRI, Hamutal**
[IL/IL]; 4 Weiss Street Apt. 34, 69124 Tel Aviv (IL).

(74) Agent: **REINHOLD COHN AND PARTNERS**; P.O.Box
4060, 61040 Tel-Aviv (IL).

(81) Designated States (national): AE, AG, AL, AM, AT, AU,
AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU,

CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,
GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC,
LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW,
MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC,
SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA,
UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (regional): ARIPO patent (GH, GM,
KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW),
Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),
European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE,
ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO,
SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM,
GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

- with international search report
- before the expiration of the time limit for amending the
claims and to be republished in the event of receipt of
amendments

(88) Date of publication of the international search report:
1 April 2004

For two-letter codes and other abbreviations, refer to the "Guid-
ance Notes on Codes and Abbreviations" appearing at the begin-
ning of each regular issue of the PCT Gazette.

(54) Title: METHOD OF DIAGNOSIS OF PREGNANCY-RELATED COMPLICATIONS

(57) Abstract: A method for diagnosing pregnancy-related complications in a pregnant woman. The method comprises (a) provid-
ing PP13-responding cells having a membrane; (b) exposing the cells to standard PP13; (c) exposing PP13-responding cells to PP13
obtained from the woman, and (d) determining the existence of a modification in the permeability of the cell membrane in (b) and
in (c) as a result of exposure to PP13. The modification in permeability in (b) and (c) is then compared, a change in the permeability
of (c) as compared to the permeability in (b) indicating the existence of a pregnancy complication in the woman.

INTERNATIONAL SEARCH REPORT

International Application No

PCT/IL 03/00706

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 G01N33/68

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 G01N

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ, BIOSIS, MEDLINE, EMBASE

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	WO 99 38970 A (DIAGNOSTIC TECHNOLOGIES LTD ;MANDEL SILVIA (IL); PALTIELI YOAV (IL) 5 August 1999 (1999-08-05) cited in the application claims 7-11	1-36
A	US 5 198 366 A (SILBERMAN MICHAEL) 30 March 1993 (1993-03-30) cited in the application the whole document	1-36



Further documents are listed in the continuation of box C.



Patent family members are listed in annex.

* Special categories of cited documents :

- *A* document defining the general state of the art which is not considered to be of particular relevance
- *E* earlier document but published on or after the international filing date
- *L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- *O* document referring to an oral disclosure, use, exhibition or other means
- *P* document published prior to the international filing date but later than the priority date claimed

T later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

X document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

Y document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

& document member of the same patent family

Date of the actual completion of the international search

27 January 2004

Date of mailing of the international search report

13/02/2004

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2
NL - 2280 HV Rijswijk
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,
Fax: (+31-70) 340-3016

Authorized officer

Vanmontfort, D

INTERNATIONAL SEARCH REPORT

International Application No
PCT/IL 03/00706

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	<p>CASANELLO PAOLA ET AL: "Intrauterine growth retardation is associated with reduced activity and expression of the cationic amino acid transport systems y+/hCAT-1 and y+/hCAT-2B and lower activity of nitric oxide synthase in human umbilical vein endothelial cells" CIRCULATION RESEARCH, vol. 91, no. 2, 26 July 2002 (2002-07-26), pages 127-134, XP002268121 ISSN: 0009-7330 abstract page 130, column 2, paragraph 2 page 131, column 2, paragraph 3 ---</p>	1-22, 30, 31, 36
A	<p>MALATYALIOGLU E ET AL: "Levels of stable metabolites of prostacyclin and thromboxane A2 and their ratio in normotensive and preeclamptic pregnant women during the antepartum and postpartum periods" JOURNAL OF MATERNAL-FETAL MEDICINE 2000 UNITED STATES, vol. 9, no. 3, 2000, pages 173-177, XP009024588 ISSN: 1057-0802 abstract ---</p>	32-35
A	<p>WANG Y P ET AL: "Decreased levels of polyunsaturated fatty acids in preeclampsia." AMERICAN JOURNAL OF OBSTETRICS AND GYNECOLOGY. UNITED STATES MAR 1991, vol. 164, no. 3, March 1991 (1991-03), pages 812-818, XP009024589 ISSN: 0002-9378 abstract page 816, column 2, paragraph 3 ---</p>	23-31
A	<p>SCHIFF E ET AL: "ARACHIDONIC ACID METABOLISM IN THE PATHOPHYSIOLOGY AND PREVENTION OF PREECLAMPSIA A REVIEW" ISRAEL JOURNAL OF MEDICAL SCIENCES, vol. 27, no. 10, 1991, pages 578-582, XP009024590 ISSN: 0021-2180 the whole document -----</p>	23-31

INTERNATIONAL SEARCH REPORT

International Application No.
PCT/IL 03/00706

Box I Observations where certain claims were found unsearchable (Continuation of Item 1 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☒ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:

Although claims 1-12 and 14-18 are directed to a diagnostic method practised on the human/animal body, the search has been carried out and based on the alleged effects of the compound.
2. ☐ Claims Nos.:
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

1. ☐ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☐ No protest accompanied the payment of additional search fees.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/IL 03/00706

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
WO 9938970	A	05-08-1999	AU 2071799 A	16-08-1999
			CA 2319699 A1	05-08-1999
			EP 1051487 A1	15-11-2000
			WO 9938970 A1	05-08-1999
			JP 2002516658 T	11-06-2002
			US 2003092188 A1	15-05-2003
			US 6548306 B1	15-04-2003
			ZA 9900677 A	02-09-1999
US 5198366	A	30-03-1993	IL 78237 A	30-06-1991
			CA 1295939 C	18-02-1992